IBM 1U 17-inch and 19-inch Flat Panel Console Kits

IBM System x at-a-glance guide

These cost-effective Flat Panel Console Kits offer a powerful and convenient way to manage space constrained rack environments from a single console. These densely packed 1U solutions let you easily set up and control rack-mounted IBM System x or BladeCenter servers and offer additional space savings by allowing the mounting of the KVM switch in the 0U space behind the console.

These kits include either a 17" or 19" LCD display and accept an UltraNav keyboard available in 29 languages (the keyboard must be ordered separately). The 19-inch kit also includes as standard a multi-burner drive and USB port for additional convenience.

Figure 1. IBM 1U 19-inch Flat Panel Console Kit with the IBM UltraNav USB US English keyboard

Did You Know?

Beyond a larger screen size, the 19” Console Kit, when coupled with the IBM GCM2 or LCM 2 and VCO dongles, creates a virtual media solution that allows for the out-of-band transfer of data to deploy or patch multiple servers from one local console either through the integrated USB pass thru or integrated optical drive. This solution offers potential savings by allowing the removal of the optical drive in each server and eliminating the need to physically locate each server to insert media at the rack.

Part number information

Table 1. Ordering part numbers and feature codes

Description	Part number	Feature code
IBM 1U 17-inch Flat Panel Console Kit	172317X	1723HC1 fc 0051
IBM 1U 19-inch Flat Panel Console Kit with Multi-Burner Drive	172319X	1723HC1 fc 0052

The part number for the IBM 1U 17-inch Flat Panel Console Kit includes the following items:

- One console unit with a 17" LCD display, AC adapter, and cable-management arm
- Rails and mounting brackets
- One 2.4 m (8 ft) IEC connector power cable
- Miscellaneous hardware kit (cage nuts, clip nuts, screws, cable straps)
- Hook-and-loop fastener strips
- IBM Documentation CD

The part number for the IBM 1U 19-inch Flat Panel Console Kit includes the following items:

- One console unit with 19" LCD display, optical drive, AC adapter, and cable-management arm
- Rails and mounting brackets
- One 2.4 m (8 ft) IEC connector power cable
- Miscellaneous hardware kit (cage nuts, clip nuts, screws, cable straps)
- Hook-and-loop fastener strips
- IBM Documentation CD

Note: The console kits do not include a keyboard. See Table 2 for the supported USB keyboards and Table 3 for the supported PS/2 keyboards.

Figure 2. IBM 1U 17-inch Flat Panel Console Kit with the IBM UltraNav USB US English keyboard

Table 2. Supported USB keyboards

Description	Part number	Feature code
IBM UltraNav USB keyboard - Arabic 253	40K5373	8661
IBM UltraNav USB keyboard - Belgium/UK 120	40K5374	8662
IBM UltraNav USB keyboard - Chinese/US 467	40K5375	8663
IBM UltraNav USB keyboard - Czech 489	40K5376	8664
IBM UltraNav USB keyboard - Danish 159	40K5377	8665
IBM UltraNav USB keyboard - Dutch 143	40K5378	8666
IBM UltraNav USB keyboard - French 189	40K5379	8667
IBM UltraNav USB keyboard - French/Canadian 445	40K5380	8668
IBM UltraNav USB keyboard - German 129	40K5381	8669
IBM UltraNav USB keyboard - Greek 219	40K5382	8670
IBM UltraNav USB keyboard - Hebrew 212	40K5383	8671
IBM UltraNav USB keyboard - Hungarian 208	40K5384	8672
IBM UltraNav USB keyboard - Italian 141	40K5385	8673
IBM UltraNav USB keyboard - Japanese 194	40K5386	8674
IBM UltraNav USB keyboard - Korean 413	40K5387	8675
IBM UltraNav USB keyboard - LA Spanish 171	40K5388	8676
IBM UltraNav USB keyboard - Norwegian 155	40K5389	8677
IBM UltraNav USB keyboard - Polish 214	40K5390	8678
IBM UltraNav USB keyboard - Portugese 163	40K5391	8679
IBM UltraNav USB keyboard - Russian Cyrillic 441	40K5392	8680
IBM UltraNav USB keyboard - Slovak 245	40K5393	8681
IBM UltraNav USB keyboard - Slovenian	40K5401	8689
IBM UltraNav USB keyboard - Spanish 172	40K5394	8682
IBM UltraNav USB keyboard - Swedish/Finnish 153	40K5395	8683
IBM UltraNav USB keyboard - Swiss French/German 150	40K5396	8684
IBM UltraNav USB keyboard - Thai 191	40K5397	8685
IBM UltraNav USB keyboard - Turkish 179	40K5398	8686
IBM UltraNav USB keyboard - UK English 166	40K5399	8687
IBM UltraNav USB keyboard - US English 103P	40K5372	8660
IBM UltraNav USB keyboard - US Euro 103P	40K5400	8688

Table 3 lists the supported PS/2 keyboards. As of October 31, 2009, each of these keyboards was withdrawn from marketing.

Table 3. Supported PS/2 keyboards (all now withdrawn from marketing)

Description	Part number
IBM Keyboard w/ Integrated Pointing Device PS/2 - Arabic 253	42C0031
IBM Keyboard w/ Integrated Pointing Device PS/2 - Belgium/UK 120	42C0032
IBM Keyboard w/ Integrated Pointing Device PS/2 - Chinese/US 467	42C0033
IBM Keyboard w/ Integrated Pointing Device PS/2 - Czech 489	42C0034
IBM Keyboard w/ Integrated Pointing Device PS/2 - Danish 159	42C0035
IBM Keyboard w/ Integrated Pointing Device PS/2 - Dutch 143	42C0036
IBM Keyboard w/ Integrated Pointing Device PS/2 - French 189	42C0037
IBM Keyboard w/ Integrated Pointing Device PS/2 - French/Canada 445	42C0038
IBM Keyboard w/ Integrated Pointing Device PS/2 - German 129	42C0039
IBM Keyboard w/ Integrated Pointing Device PS/2 - Greek 219	42C0040
IBM Keyboard w/ Integrated Pointing Device PS/2 - Hebrew 212	42C0041
IBM Keyboard w/ Integrated Pointing Device PS/2 - Hungarian 208	42C0042
IBM Keyboard w/ Integrated Pointing Device PS/2 - Italy/Italian 141	42C0043
IBM Keyboard w/ Integrated Pointing Device PS/2 - Japanese 194	42C0044
IBM Keyboard w/ Integrated Pointing Device PS/2 - Korean 413	42C0045
IBM Keyboard w/ Integrated Pointing Device PS/2 - LA Spanish 171	42C0046
IBM Keyboard w/ Integrated Pointing Device PS/2 - Norwegian 155	42C0047
IBM Keyboard w/ Integrated Pointing Device PS/2 - Polish 214	42C0048
IBM Keyboard w/ Integrated Pointing Device PS/2 - Portugese 163	42C0049
IBM Keyboard w/ Integrated Pointing Device PS/2 - Russian 441	42C0050
IBM Keyboard w/ Integrated Pointing Device PS/2 - Slovak 245	42C0051
IBM Keyboard w/ Integrated Pointing Device PS/2 - Slovenian 234	42C0059
IBM Keyboard w/ Integrated Pointing Device PS/2 - Spanish 172	42C0052
IBM Keyboard w/ Integrated Pointing Device PS/2 - Swed/Finn 153	42C0053
IBM Keyboard w/ Integrated Pointing Device PS/2 - Swiss F/G 150	42C0054
IBM Keyboard w/ Integrated Pointing Device PS/2 - Thai 191	42C0055
IBM Keyboard w/ Integrated Pointing Device PS/2 - Turkish 179	42C0056
IBM Keyboard w/ Integrated Pointing Device PS/2 - UK English 166	42C0057
IBM Keyboard w/ Integrated Pointing Device PS/2 - US English 103P	42C0030
IBM Keyboard w/ Integrated Pointing Device PS/2 - US Euro 103P	42C0058

Features

The features of the 17-inch Flat Panel Console Kit are as follows:

- Integrated 17-inch display supports maximum resolution of 1280X1024 @ 75 Hz
- Display features an anti-reflective coating that reduces surface reflectivity by approximately 25%
- Installable in a rack - consumes only 1U of rack space
- Includes rail kit and cable-management arm so the unit can close and slide back into the rack
- Provides easy local access and control of a server
- Compatible with all IBM Console Managers and Switches for control and access of multiple servers
- Allows installation of console switch in the same 1U space

The features of the 19-inch Flat Panel Console Kit are as follows:

- Integrated 19-inch display supports maximum resolution of 1280X1024 @ 75 Hz
- Display features an anti-reflective coating that reduces surface reflectivity by approximately 25%
- USB pass-through port on the front of the tray
- USB Multi-burner optical drive
- Installable in a rack - consumes only 1U of rack space
- Includes rail kit and cable-management arm so the unit can close and slide back into the rack
- Provides easy local access and control of a server
- Compatible with all IBM Console Managers and Switches for control and access of multiple servers
- Allows installation of console switch in the same 1U space
- Integrated USB port and optical drive pair with an LCM2 or GCM2 Console Switch for remote USB media support

Figure 3 shows the IBM 1U 19-inch Flat Panel Console Kit in the closed position.

Figure 3. IBM 1U 19-inch Flat Panel Console Kit

Table 4 shows a comparison of the two console kits.

Table 4. Feature comparison

Feature	17-inch Flat Panel Console Kit	19-inch Flat Panel Console Kit
Form Factor	1U	1U
Monitor	17” Clam-shell	19” Clam-shell
Keyboard and mouse	Accepts any UltraNav Keyboard	Accepts any UltraNav Keyboard
Pass-through USB	None	Yes
Rack shippable	Yes	Yes
KVM in same 1U space	Yes	Yes
Cable management arm	Yes	Yes
Optical media	None	Standard DVD Multiburner

Figure 4 shows the 17-inch Flat Panel Console Kit in the closed position.

Figure 4. IBM 1U 17-inch Flat Panel Console Kit

Display specifications

The 17-inch and 19-inch displays have the following specifications:

Table 5. Display specifications

Specification	17-inch Flat Panel Console Kit	19-inch Flat Panel Console Kit
Screen size	17.0 inch diagonal	19.0 inch diagonal
Display Area	338 x 270 mm	376 x 301 mm
Type	TFT active matrix	
Pixel pitch	0.264 x 0.264 mm	
Contrast	400:1	
Brightness:	250 cd/m2	
Viewing angle:	150 degrees to 115 degrees (H/V)	
Frequency		
Horizontal	30 - 79 kHz	31 - 80 kHz
Vertical	50 - 77 Hz	56 - 75 Hz
Display Color	16.7 M colors	
Display Resolution		
Optimum Mode	1280 x 1024 at 60 Hz	
Maximum Mode	1280 x 1024 at 75 Hz	
Input Signal		
Connector	VGA (DB15)	
Power Supply	AC 100 - 240 V, 60 Hz - 50 Hz to dc 12 V/ 5.0 A	
Power Consumption		
Normal operation	Less than 36 watts	Less than 40 watts
Power Saving mode	Less than 2 watts	Less than 1 watts
Environmental		
Operating Temperature	(0°C to 50°C)	
Operating Humidity	10% to 80%	
Operating Altitude	Maximum 3000 meters	
Storage Temperature	(-20°C to +60°C)	
Storage Humidity	5% to 95%	
Storage Altitude	Maximum 3000 meters	

Multi-burner specifications

The specifications for the optical drive standard in the 19-inch Flat Panel Console Kit are as follows.

Table 6. Multi-burner specifications

Performance	
Average access time:	DVD-ROM 160 ms
(1/3 stroke)	CD-ROM 140 ms
Write speed:	
DVD-R	2x CLV, 4x ZCLV, 8x CAV
DVD-R DL	2x CLV, 4x ZCLV, 6x ZCLV
DVD-RW	1x, 2x CLV, 4x, 6x ZCLV
DVD-RAM	2x, 3x ZCLV, 5x PCAV (Ver.2.2) (16x Media: Not support)
DVD+R	2.4x CLV, 4x ZCLV, 8x CAV
DVD+R DL	2.4x CLV, 4x ZCLV, 6x ZCLV
DVD+RW	2.4x, 3.3x CLV, 4x ZCLV, 8x ZCLV (8x Speed disc: 3.3x CLV, 8x ZCLV)
CD-R	10x CLV, 16x, 24x ZCLV 4x, 10x CLV, 16x ZCLV
CD-RW	(High Speed: 10x CLV, Ultra Speed: 16x ZCLV, Ultra Speed plus: 16x ZCLV)
Read speed:	
DVD-R/RW/ROM	8x/8x/8x max.
DVD-R DL	8x max.
DVD-RAM (Ver.1.0)	2x
(Ver.2.2)	2x, 3x, 5x
DVD-Video (CSS Compliant Disc)	8x max. (Single/Dual layer)
DVD+R/+RW	8x/8x max.
DVD+R DL	8x max
CD-R/RW/ROM	24x/24x/24x max.
CD-DA (DAE)	20x max.
Sustained Transfer rate:	
DVD-ROM	11.08 MBps (8x) max.
CD-ROM	3,600 KBps (24x) max

Physical specifications

- Height: 43 mm (1.7 in)
- Width: 483 mm (19.0 in)
- Depth: 711 mm (28.0 in)
- Weight: 12.3 kg (27.3 lb)

Warranty

Three year, customer replaceable unit (CRU), limited warranty.

Supported racks

The 1U 17-inch and 1U 19-inch Flat Panel Console Kits require 1U of rack space in one of the following rack cabinets:

- IBM S2 42U rack
- IBM S2 25U rack
- IBM NetBAY42 Enterprise rack
- NetBAY11 Standard rack
- IBM S2 42U Dynamic Standard Rack
- IBM S2 42U Dynamic Expansion Rack

Popular configurations

Figure 5 shows the 19-inch Flat Panel Console Kit with an UltraNav keyboard and USB optical drive connected to the IBM GCM2 Console Switch. The console switch is connected to each managed server using IBM Virtual Media Conversion Option (VCO) cables, one for each server. These VCO cables enable the sharing of the USB devices (optical drive and any device attached to the USB pass-through port on the Flat Panel Console Kit) to the managed servers.

Note: The VCO cables do not support chaining of cables.

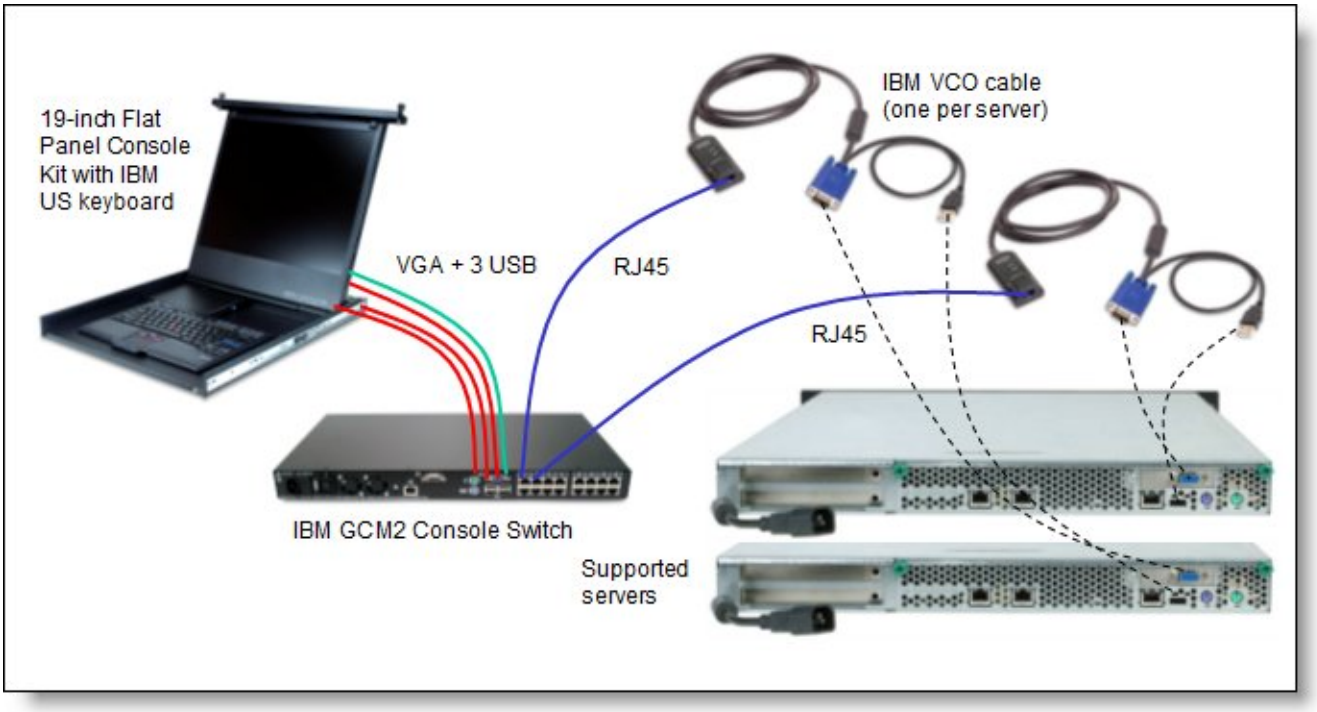

Figure 5. 19-inch Flat Panel Console Kit sample configuration

The parts used are listed in Table 7.

Table 7. Components used when the 19-inch Flat Panel Console Kit is connected to the GCM2 Console Switch

Part number/ machine type	Description	Quantity
172319X	IBM 1U 19-inch Flat Panel Console Kit	1
40K5372	IBM UltraNav USB keyboard - US English	1
17352GX	IBM Global 2 x 16 Console Manager (GCM2)	1
39M2894	IBM Virtual Media Conversion Option cable (one per managed server)	2 (as shown)
Varies	Ethernet cabling	2 (as shown)
Varies	Servers with USB and VGA ports	2 (as shown)

Related publications

For more information refer to these documents:

- 1U 17-inch and 1U 19-inch Flat Panel Console Kits product page
  http://www.ibm.com/systems/x/hardware/options/flatpanel.html
- Overview - IBM 1U 17-inch Flat Panel Console Kit and IBM 1U 19-inch Flat Panel Console Kit with a multi-burner drive
  http://www.ibm.com/support/docview.wss?uid=psg1MIGR-5079181
- Installation and Maintenance Guide - 1U 17-inch Flat Panel Console Kit
  http://www.ibm.com/support/docview.wss?uid=psg1MIGR-5079448
- Installation and Maintenance Guide - 1U 19-inch Flat-Panel Console Kit with Multi-Burner Drive
  http://www.ibm.com/support/docview.wss?uid=psg1MIGR-5079449
- IBM US Announcement Letter
  http://ibm.com/common/ssi/cgi-bin/ssialias?infotype=dd&subtype=ca&&htmlfid=897/ENUS109-019

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